

### ABSTRACT

Genetic constructs and methods are disclosed for the production, maintenance and  
5 control of transgenes in transgenic eukaryotic organisms that undergo meiosis in which pollen  
or sperm can be outcrossed; this includes: transgenic animals, plant cells, plant tissues and  
whole plants. More specifically, this invention relates to the control of transgene transmission  
by male and/or female gametes or gametophytes using a gametophytic sterility trait (GST).  
The genetic constructs and methodologies of the present invention provide the ability to  
10 control the undesired spread of transgenes. In addition, this invention also provides the tools  
and methodologies to enrich a plant or other eukaryotic genome for dispersed and/or stable  
transposition events.